# Nucleus® Freedom™ BTE Rechargeable Battery (A25) and Nucleus® Freedom™ BTE Recharger

The Nucleus® Freedom™ BTE Rechargeable Battery (A25) is designed for use with your Nucleus® Freedom™ BTE Controller (3 Zinc Air). It is a rechargeable lithium-ion battery, used in place of the battery holder (3 Zinc Air).

Always use the Nucleus® Freedom™ BTE Recharger supplied to recharge the Freedom BTE Rechargeable Battery. A power supply is also supplied, to connect the Freedom BTE Recharger to mains power, or the power outlet. An optional power supply is separately available from Cochlear: it will connect the charger to a 12 volt power supply such as a car outlet.

To get the longest battery life, always fully charge a new Freedom BTE Rechargeable Battery, before it is first used.

Your warranty is enclosed.

Please complete the registration card and return it to Cochlear within 30 days of receiving your product.

For future reference, keep this information in a safe place.

#### Note:

Dispose of used batteries and electronic parts in accordance with your local regulations.



# Nucleus® Freedom™ BTE Rechargeable Battery (A25)

To use your Freedom BTE Rechargeable Battery (A25):

- I. Charge your Freedom BTE Rechargeable Battery until the green light stops flashing.
  - For information on charging your battery see later section *Nucleus*® *Freedom™ BTE Recharger*.
- 2. Remove the battery holder or last Freedom BTE Rechargeable Battery, from the BTE Controller (3 Zinc Air).



 Push the Freedom BTE Rechargeable Battery into the BTE Controller, until it clicks into place.



Push the Select button to turn on and use your Nucleus®
 Freedom™ BTE speech processor.



Only the Freedom BTE Rechargeable Battery should be used with your Freedom BTE speech processor (3 Zinc Air).

Replace and recharge batteries when either:

- low or flat battery warning tones are heard
- low or flat battery help message shows on the display (HI or H2)
- you stop hearing sound
- the sound you hear becomes intermittent.

Since Freedom Rechargeable Batteries have no memory effect, you can recharge them without completely discharging them. They can also be partially recharged and used without affecting their long term performance. However, a fully charged battery will last longer than a partially charged one.

For information on the warning sounds or indicators, see Troubleshooting in your Nucleus® Freedom™ Speech Processor User Manual for your BTE speech processor.

For further information on using batteries with your BTE Controller see your Nucleus® Freedom™ Speech Processor User Manual.

Always remove the battery from your speech processor when it is flat, or when the BTE Controller is to be stored for a period of time.

#### **Battery usage**

Make sure the o-ring is always in place on the battery you are using.

As you use rechargeable lithium-ion batteries, their battery life will fade. When batteries no longer last for a reasonable period of time, dispose of them in accordance with your local regulations.

Replacement batteries are available from your clinician or Cochlear Limited.

#### **Battery storage**

Remove Freedom Rechargeable Batteries from the charger and store them separately (from the other batteries), when they will not be used or recharged for more than one month.

After storing rechargeable batteries for an extended period, it may be necessary to recharge them.

## Cautions when using batteries

- Carry spare batteries in a closed plastic bag for safety, making sure they do not come into contact with either each other or metallic objects, for example coins or hairclips. Any of these situations may accidentally short circuit the battery, which may then become warm. Very rarely, the battery may possibly crack open.
- Store batteries in a cool place.
- Do not heat batteries e.g. never leave batteries in sunlight, behind a window or in a car. Do not solder to battery terminals.
- Never immerse batteries in water.
- Do not deform batteries e.g. do not force them into your speech processor or the charger. Do not drop or throw batteries on hard surfaces (e.g. floors or walls).
- Do not tamper with batteries in any way that may cause rupture with the battery body. That is, do not use tools which can damage the battery body either mechanically (e.g. pliers) or via generating heat (e.g. soldering iron).
- Do not let children replace batteries without adult supervision.

- Make sure that batteries are kept out of reach of young children. Small parts such as batteries may be hazardous if swallowed, or may cause choking if ingested or inhaled.
- Batteries can be harmful if swallowed. If swallowed, seek prompt medical attention at the nearest emergency center or Poisons Information Center.
- Never dispose of batteries in fire.
- Flat batteries may exceptionally leak corrosive fluids and cause damage if left inside your Freedom BTE Controller. In the unlikely event that a battery has leaked fluid, do not allow the fluid or liquid to come in contact with skin or eyes. If contact is made, wash with a lot of water and seek medical attention. It is always a good idea to wash your hands after you have handled batteries.

## Nucleus® Freedom™ BTE Recharger



### Only use

- the Freedom BTE Recharger supplied, to charge the Nucleus® Freedom™ BTE Rechargeable Battery (A25).
- Freedom Rechargeable Batteries in the Freedom BTE Recharger.

Do not insert the Freedom battery holder (3 Zinc Air) into the Freedom BTE Recharger. Do not recharge disposable or other rechargeable batteries, e.g. zinc/carbon, alkaline or NiMH batteries.

## **Power supply**

A mains power supply cable is supplied to connect your charger to your mains power outlet.

The plugs are interchangeable, that is they can be changed to meet your local mains power outlet requirements, or if when travelling, you are using differing power sources.

To change plugs on the power supply, push the arrow towards the cable until the plug is released. Choose the plug you want and place over the contact area. Push the arrow towards the cable until the plug fits into the space and the arrow clips into place.

An alternative cable that can be connected to your car's 12 volt power supply (the cigarette lighter socket) is separately available from Cochlear. For information on the 12 volt power supply, see the instructions included with the cable.

#### Caution:

Do not use the charger to charge any other battery types than the one supplied. Always use the supplied mains power plug pack, or 12 volt power or car adaptor cable to power your charger.

## Charging the battery

To charge or recharge your battery:

1. Connect the mains power supply cable, or the 12 volt power supply cable to the charger.

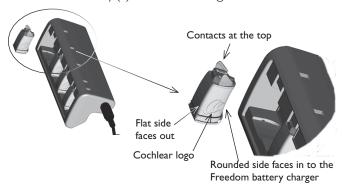


2. Connect the other end of the cable to either the mains power (power outlet) or to the car socket, as appropriate and turn on the power, where required.

The green light near the cable connection, on the back of the charger indicates the power is connected.



#### 3. Push the battery(s) into the charger.

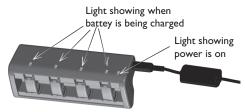


Up to four batteries may be charged at any one time.



### 4. Leave the battery(s) to charge.

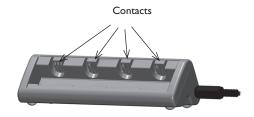
A light shows behind each battery space where a battery is charging, when the power is on.



#### Each light shows:

- flashing green when the battery is charging
- steady green when the battery is fully charged
- steady red when there is a problem when charging that battery.

The battery should be fully charged within four hours.



Do not put metal objects near the contacts of the charger. Do not touch the contacts when the charger is turned on.

## **Quick Tips**

## If the light shows red

If the light above the battery shows red:

- I. Unplug the charger and, with a dry clean cotton cloth clean the contacts of both the charger and battery.
- 2. Reconnect the power to the charger and try again with the same battery.
- 3. If it continues to show red:
  - move the battery to a different space
  - use another battery
- 4. If the light only shows red in the one space then the BTE Recharger needs to be replaced. Return the charger to your clinician for replacement.
- 5. If, when a new battery is used in place of the original battery, and the green light then shows, return the original battery to Cochlear. This indicates the original battery was not working.

## If no light shows

If no light shows behind the battery you want to charge:

- I. Check the power has been connected: the power indicator green light (near the power cable connection) should be showing at the back of the charger.
  - If the power is connected but the green power indicator light does not show, return the charger to your clinician for replacement.
- 2. Check the battery has been properly placed in the charger, so the contact has been made between the battery and the charger.
- 3. Follow the steps suggested for when the red light shows.

## **Technical Specifications**

Nucleus® Freedom™ BTE Rechargeable Battery (A25) Battery type:

Power supply: 12V, 1.25A, centre positive DC plug Battery dimensions: interchangeable with battery holder

Battery weight: approx.7g 180 mAh Initial battery capacity: 3.7 V

Average battery voltage: constant voltage/constant current method

Charging method for BTE Rechargeable Batteries: Maximum charge voltage

4.2V

Maximum charge current: 0.5C (90mA)

Polarity charging: ensure battery contacts face corresponding charger

contacts

#### **Environmental Conditions**

 $-20^{\circ}$  C (-4° F) to +50° C (+122° F) Storage Temperature:

Storage Relative Humidity: 0% to 90%

 $+5^{\circ}$  C (+41° F) to +40° C (+104° F) Operating Temperature:

Operating Relative Humidity: 0% to 90%

0° C (32° F) to 60° C (140° F) Charge temperature:

#### Note:

When the Freedom BTE Rechargeable Battery is used, the Nucleus® Freedom™ BTE Speech Processor is water resistant (i. e. IP44).

## Labelling symbols

The symbols below are found on the Freedom Rechargeable Battery and Battery Charger components and packaging.

Symbol	Meaning
<u>i</u>	See instructions
Ī	Fragile
-20°C (-4°F)	Temperature limit
% 0 - 90	Humidity limit
CE	CE registration mark
IP44	IP rating - protected against solid foreign objects greater than or equal to 1.0mm diameter, and protected against spashing water
X	Disposal - dispose of electrical components in accordance with your local regulations
<b>X</b>	Disposal - do not dispose in fire

The statements made in this guide are believed to be true and correct as of the date of publication. However, specifications are subject to change without notice.

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